

Remarks

Applicants respectfully request reconsideration of the present U.S. Patent application as amended herein. Claims 1, 8 and 14 have been amended. Claims 19-22 have been canceled previously. No claims have been added or canceled herein. Thus, claims 1-18 are pending.

CLAIM REJECTIONS – 35 U.S.C. § 103(a)

Claims 1, 2, 4, 5, 7-9, 11, 12, 14, 15 and 17 were rejected as being unpatentable over U.S. Patent No. 6,983,334 issued to Riedle (*Riedle*) in view of U.S. Patent Publication No. 2005/0177625 of Paek (*Paek*) and further in view of U.S. Patent Publication No. 6,151,696 issued to Miller, et al. (*Miller 1*) and U.S. Patent No. 5,920,701 issued to Miller, et al. (*Miller 2*). For at least the reasons set forth below, Applicants submit that claims 1, 2, 4, 5, 7-9, 11, 12, 14, 15 and 17 are not rendered obvious by *Riedle*, *Paek*, *Miller 1* and *Miller 2*.

As a preliminary matter, Applicants note that the Office Action states the previous remarks and amendments were insufficient to overcome the previous rejections. However, two new references (*Miller 1* and *Miller 2*) are used to reject the claims. These references were not relied upon in the previous Office Action.

Claim 1 recites:

receiving a request from a first client device to multicast a file as a plurality of packets of data from a server device to multiple client devices by executing a multi-threaded application with at least one thread monitoring a port designated for receiving multicast requests;

executing at least three request handlers to manage requests from remote devices, the at least three request handlers comprising an upload

request handler, a multicast download request handler and a unicast download request handler;

transmitting the plurality of packets of data from a server to the multiple client devices using a multicast trivial file transfer protocol (TFTP) as a TFTP-compliant flow; and

applying, by the server, one or more flow control techniques not defined by the multicast TFTP to the TFTP-compliant flow, wherein the flow control comprises at least determining whether the server device has sufficient resources to satisfy the request based on a block size corresponding to the request and an available bandwidth, and sending an error packet to the first client device if the server does not have sufficient resources to satisfy the request.

Thus, Applicants claim applying server-side flow control to a TFTP flow by determining if sufficient resources are available to satisfy a TFTP request based on block size and available bandwidth. Claims 8 and 14 similarly recite applying server-side flow control to a TFTP flow by determining if sufficient resources are available to satisfy a TFTP request based on block size and available bandwidth.

Riedle discloses TFTP multicast. Applicants agree with the Office Action that *Riedle* does not disclose flow control. See Office Action at page 4. *Paek* is cited to disclose flow control not defined by the multicast TFTP. However, *Paek* does not disclose server-side flow control for a TFTP flow. Further, *Paek* does not disclose determining if sufficient resources are available to satisfy a TFTP request based on block size and available bandwidth.

The cited passages of *Paek* (paragraph 0122, see Office Action at page 4) merely recite that the server responds to a request from a client device or does not respond based on whether a bit is set. This technique is for providing a broadcast functionality to TFTP. See paragraph 0121. The decision whether the response to a request will be a multicast or broadcast is based on the contents of a field in the request packet. See paragraph 0121.

This is not server-side flow control. Therefore, *Paek* does not teach or suggest server-side flow control.

Miller 1 discusses the inefficiencies of TFTP. See col. 2, lines 5-21. *Miller 1* provides an *alternative* to TFTP that supports flow control. Thus, *Miller 1 teaches away* from the invention as recited in the claims. The proposed combination would require that the principles of operation disclosed by *Miller 1* be fundamentally changed to utilize TFTP. The proposed modification of the prior art cannot change the principle of operation. See MPEP §2143.01(VI). If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. In re Ratti, 270 F.2d 810, 123 USPQ 349 (CCPA 1959). A proposed modification is invalid if the “suggested combination of references would require a substantial reconstruction and redesign of the elements shown in [the primary reference] as well as a change in the basic principle under which [it] ... was designed to operate.” Id., 270 F.2d at 813, 123 USPQ at 352. Therefore, the combination of *Miller 1* with *Riedle* and *Paek* would change the principle of operation of *Miller 1*.

Miller 2 fails to disclose TFTP. Therefore, *Miller 2* fails to cure the deficiencies of *Riedle*, *Paek* and *Miller 1* as discussed above. Therefore, no combination of *Riedle*, *Paek*, *Miller 1* and *Miller 2* can teach or suggest the invention as recited in claims 1, 8 and 14.

Claims 2, 4, 5 and 7 depend from claim 1. Claims 9, 11 and 12 depend from claim 8. Claims 15 and 17 depend from claim 14. Because dependent claims include the limitations of the claims from which they depend, Applicants submit that claims 2, 4, 5,

7, 9, 11, 12, 15 and 17 are not rendered obvious by *Riedle, Paek, Miller 1* and *Miller 2* for at least the reasons set forth above.

Claims 3, 6, 10, 13, 16 and 18 were rejected as being unpatentable over *Riedle, Paek, Miller 1* and *Miller 2* in view of U.S. Patent Publication No. 2007/0198737 of Xu (*Xu*). Claims 3, 6, 10, 13, 16 and 18 depend from independent claims discussed above. *Xu* does not cure the deficiencies of *Riedle, Paek, Miller 1* and *Miller 2* set forth above. Therefore, no combination of *Riedle, Paek, Miller 1, Miller 2* and *Xu* can teach or suggest the invention as recited in claims 3, 6, 10, 13, 16 and 18.

CONCLUSION

For at least the foregoing reasons, Applicants submit that the rejections have been overcome. Therefore, claims 1-18 are in condition for allowance and such action is earnestly solicited. The Examiner is respectfully requested to contact the undersigned by telephone if such contact would further the examination of the present application. Please charge any shortages and credit any overcharges to our Deposit Account number 02-2666.

Respectfully submitted,
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN, LLP

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/Paul A. Mendonsa/
Paul A. Mendonsa
Attorney for Applicant
Reg. No. 42,879

12400 Wilshire Boulevard
Seventh Floor
Los Angeles, CA 90025-1026
(503) 439-8778